

Application No. 09/633,738
Amendment dated October 19, 2006
After Final Office Action of July 27, 2006

Docket No.: 3430-0129P

REMARKS

The Examiner is thanked for the thorough examination of the application. No new matter is believed to be added to the application by this Response.

Status Of The Claims

Claims 1-11, 12-16 and 19-26 are pending in the application. Claims 1 and 12 are independent.

Entry Of Response

Entry of this Response under 37 C.F.R. §1.116 is respectfully requested because it places the application in condition for allowance. Alternately, entry is requested as reducing issues for appeal.

Election/Restriction

The Examiner is thanked for the rejoinder of species.

Rejections Based On Yoshida

1. Claims 1-2, 12 and 19-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Yoshida (U.S. Patent 5,936,693) in view of Chang (U.S. Patent 6,166,400), Tadahisa (JP 02-02832) and Kawabe (U.S. Patent 6,162,654).
2. Claims 3-8, 13-16 and 19-23 are rejected under 35 U.S.C. §103(a) as being unpatentable over Yoshida in view of Chang, Tadahisa and Kawabe (as applied to claims 1-2 and 12) and further in view of Ono (U.S. Patent 5,847,781).

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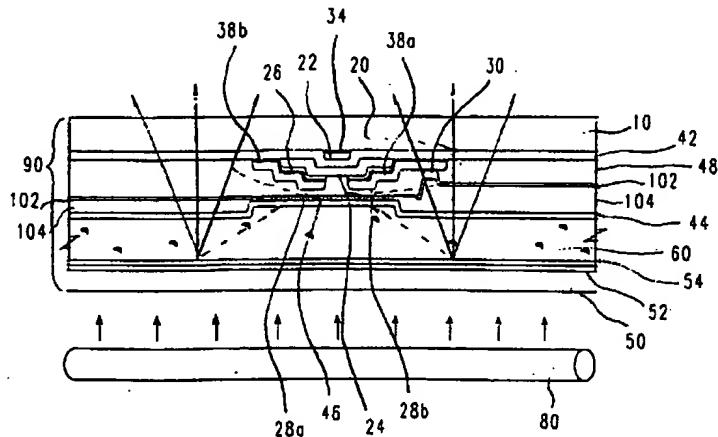
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3. Claims 24-26 are rejected under 35 U.S.C. §103(a) as being unpatentable over Yoshida in view of Chang, Tadahisa and Kawabe (as applied to claims 1-2 and 12) and further in view of Ono (as applied to claims 3, 4, 6, 13, 14 and 21-23) and further in view of Oyama (U.S. Patent 5,597,668).

Applicants traverse the aforesaid rejections and respectfully request reconsideration and withdrawal thereof for the reasons set forth below.

The present invention pertains to a liquid crystal display device that prevents dazzle effects caused by reflection of incident light. The technology of the present invention is typically depicted in Figure 5 of the application, which is reproduced below.



Among the features of the present invention, one can note a TFT structure located on a substrate 10 located farthest from a backlight device 80. The black matrix 46 shields the thin film transistor from incident light. This display geometry is reflected in independent claims 1 and 12 of the present invention. The advantages of this display geometry is discussed in the paragraph bridging pages 8 and 9 of the specification:

Black matrix 46 prevent light of the back light device 80 from passing through the gaps between the gate line and the pixel electrode and the data line and the pixel electrodes. Also, the black matrix 46 shields the thin film transistors from incident light and prevents the mixing of dispersed portions of light passing through the respective color filter layers. The mixing of the light passing through the respective color filters results in a degradation of a contrast ratio or variation of the colors. To maximize an aperture ratio, the pixel electrodes may overlap the gate and data lines so that the black matrix is formed only over the thin film transistor. Since the gaps are excluded, the black matrixes have a smaller size only to shield the thin film transistors from the light of the back light device 80, and thus the aperture ratio becomes maximized. In that case, the gate and data lines prevent the above-mentioned light color filter layers.

Yoshida pertains to a liquid crystal display device in which the TFT lies on the substrate closest to the light source. This display geometry is shown in Figure 1 of Yoshida, which is reproduced below.

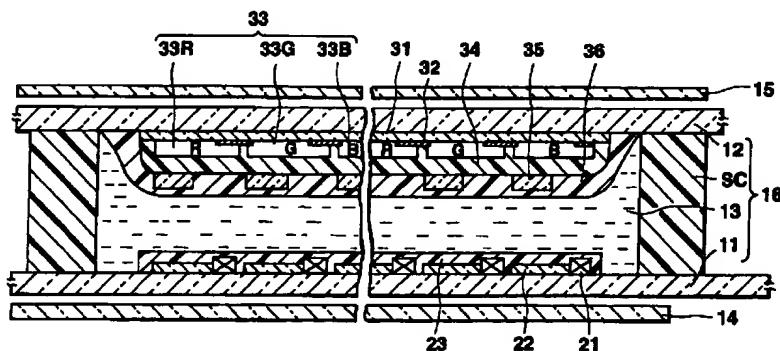
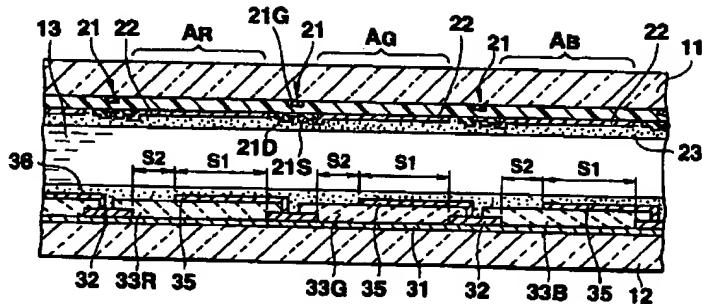


Figure 1 of Yoshida shows a lower light incident polarization plate 14 (column 6, line 21) next to a substrate 11 that bears the TFT 21 (column 5, line 37). Opposite to this structure is the light-outgoing-side polarization plate 15 (column 6, line 26). That is, in Yoshida, the TFT is on the substrate closest to the light source, which is fundamentally different from the present invention. A black matrix cannot be inserted into this geometry to shield light.

In the Office Action, the Examiner turns to Figure 27 of Yoshida. Figure 27 of Yoshida is reproduced below.



However, Figure 27 of Yoshida merely inverts the geometry of Figure 1 of Yoshida. As a result, Yoshida utterly fails to disclose a display in which a light source, a TFT and a black matrix can be advantageously arranged, such as is set forth in independent claims 1 and 12 of the present invention.

At pages 5 and 6 of the Office Action, the Examiner unequivocally admits to some of the failures of Yoshida, including the failure to form an ohmic contact layer, the failure to form a first light absorbing film under the gate electrode, the failure to form a passivation film over the whole surface of the substrate while covering the source and drain electrode, the passivation film having a contact hole on the drain electrode, the failure to form a pixel electrode on the passivation film, the pixel electrode electrically connected with the drain electrode through the contact hole, the failure to form a color filter on the pixel electrode, the failure to form a black matrix over the thin film transistor, and the failure to form a first orientation film on the color filters and the black matrices. The Examiner then turns to Chang, Tadahisa and Kawabe to address these failures.

However, Chang, Tadahisa and Kawabe fail to address the inability of Yoshida to disclose or suggest an electrode structure where a black matrix can be inserted between the light source and the TFT on the opposite substrate such that unwanted light reflectance can be prevented. The Examiner further turns to Ono for teachings pertaining to a light absorbing film and to Oyama for teachings pertaining a nitride film to reject claims 24-26. However, these teachings of Ono and Oyama fail to address the inability of Yoshida and the other secondary references to suggest independent claims 1 and 12 of the present invention. A *prima facie* case of obviousness has thus not been made. Claims depending upon claims 1 and 12 are patentable for at least the above reasons.

These rejections are overcome and withdrawal thereof is respectfully requested.

Foreign Priority

The Examiner has acknowledged foreign priority and indicated that a certified copy of the priority document has been received in the Office Action mailed February 12, 2002.

The Drawings

A Drawing Correction Authorization Request was filed on May 10, 2002. The Examiner is respectfully requested to consider this paper and indicate whether the proposed drawing corrections are acceptable in the next official action.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Robert E. Goozner, Registration No. 42,593, at (703) 205-8000, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: October 19, 2006

Respectfully submitted,

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